Q.P. Code 201013 **Reg. No.:……**

Second Year B.Sc Optometry Degree Supplementary Examinations April 2017

Optometric Optics

(2010 scheme)

Time: 3 hrs **Max marks: 80**

- **Answer all questions**
- **Draw diagram wherever necessary**

Essays **(2x15=30)**

1. What are progressive addition lenses. Discuss on the following:
   • Soft design • Advanced soft design • Multi-design • Symmetric lens design
   List down the permanent markings on the progressive addition lenses. Mention its significance.
2. Discuss the adverse effects of ultra violet radiations on cornea, crystalline lens and retina of a human eye. Brief on the following filters:
   • Heat absorbing filter • Yellow absorbing filter • Neutral grey filter • Polarizing filter

Short notes

3. List and describe any five metals used in spectacle frames. **(5x5=25)**
4. What are ghost images. Describe each type of ghost image with the help of diagrams.
5. A - 15.00 DS lens is made in lenticular form using a 20mmaperture blank, the lens is mounted at dioptrical distance of +37.00 D from centerof rotation of eye .Calculate angular field of view through this lens
6. With the help of a neat diagram explain the principle and uses of geneva lens measure.
7. Aspherical lenses.

Answer briefly **(10x2 = 20)**

8. Mention the properties of trivex lens material.
9. Calculate the jump exerted by the following lens -2.00DS, Add of +1.00DS, 50 segment.
10. Transpose the following prescription to sphero cylindrical form and show it in the optic cross -0.75DC*20/+0.75DC*110.
11. List down the different types of temples in a spectacle frame.
12. What is pantoscopic tilt and mention its two uses.
13. What are toughened lenses. List down the types of toughened lenses.
14. Define a prism diopter. State the prentice formula.
15. What is a rotary prism. List two uses of it.
16. Describe polishing burn.
17. List down the uses of fresnel prisms.

One word answer **(5x1 = 5)**

18. What is an optical axis.
19. What is catoptric power.
20. Name two glass cements.
21. Reflectance can be calculated by .....
22. What is the focal length of the lens of power -3.50DS.

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